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The 1988 Nobel Prize in Economics Honors Maurice Allais of France; Literature Prize Goes to Egyptian Novelist Naguib Mahfouz

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The 1988 Alfred Nobel Memorial Prize in economic sciences was awarded to French professor Maurice Allais, who in the 1940s and 1950s contributed significantly to the study of market equilibrium. He also revolutionized ideas about how individuals evaluate risks when making economic decisions. Until late in his career, Allais wrote exclusively in French. For this and other reasons, Allais's influence outside France has been less than in his own country, and that is reflected in the rather modest number of citations that have been tabulated for him in the *Science Citation Index*®, 1945-1988, and in the *Social Sciences Citation Index*®, 1966-1988.

The Nobel Prize in literature for 1988 went to Naguib Mahfouz of Egypt. Mahfouz, the first representative of the Arab world to receive the literature prize, is famous in his country for his depictions of urban life in Cairo. He has also helped to infuse the standard literary idiom, written in classical Arabic, with elements of colloquial speech. Until the Nobel committee's announcement, his writings were not very well known outside Egypt and the Arab world. The *Arts & Humanities Citation Index*™, 1976-1988, contains relatively few citations to his work from Western scholars.

Economics

Maurice Allais, director of economic research, National School of Mines, Paris, France, an engineer turned economist who enjoys studying physics in his spare time, became France's first Nobel laureate in economic sciences last October. The Royal Swedish Academy of Sciences, Stockholm, honored Allais, 78, "for his pioneering contributions to the theory of markets and efficient utilization of resources," so reads the citation of the Nobel committee.¹

During the 1940s Allais wrote two landmark books that had a profound influence in post-World War II France and that contributed materially to government decision making on how national monopolies, such as electricity and railroad services, could be run for greatest social efficiency. While his writings are largely theoretical and highly technical, packed with mathematical formulas, Allais has not failed to point out the practical significance of his ideas.

Over the years Allais has offered his profound and highly original insights in many realms of economic inquiry, but especially in modeling market equilibrium—a topic that

goes as far back as Adam Smith's 1776 classic *The Wealth of Nations*.² Allais built on Smith's ideas of how market prices are the "invisible hand" that organically creates equilibrium in an economic system and on the mathematical extension of Smith's verbal description by the nineteenth-century economists Léon Walras and Vilfredo Pareto. In the mathematical rigor of his model of market equilibrium, Allais surpasses both Walras and Pareto.

Allais has also contributed significantly to other fields, such as the role of the volume of money in an economic system, and in this he was an intellectual precursor by many years to the monetarist school that has come to be associated, principally, with the writings of Milton Friedman, the 1976 Nobel laureate in economics, who is currently at the Hoover Institution, Stanford, California. Allais, however, is a proponent of neither the Keynesian nor the monetarist view; he has said, "On certain points I agree with each."³

The influence of Allais's work has been greatest in France itself; his teachings and writings influenced a whole generation of students, not a few of whom went on to high

positions in the French government and who implemented, to varying degrees, some of Allais's findings on efficient management of national resources (including service monopolies) through pricing. One such student was Marcel Boiteux, who directed France's nationalized electric service and set utility prices according to Allais's models. Another student was the distinguished French economist Edmond Malivaud, who is frequently mentioned as a potential Nobel Prize winner.

Yet another student of Allais has won the prize—and ahead of his teacher: Gerard Debreu. Debreu, of the University of California, Berkeley, emigrated to the US from France, became a US citizen in 1976, and received the Nobel Prize in economics in 1983. Although by birth French, Debreu was at the time of the award an American, which explains why Allais is France's first laureate in economics.

Abroad, however, both outside academic circles and even within some, Allais's name was not generally well known until the Nobel committee's lightning bolt struck. One US economist familiar with the contributions of Allais is the 1970 Nobel laureate Paul A. Samuelson, Massachusetts Institute of Technology (MIT), Cambridge. At the time of the award, Samuelson was quoted as calling Allais "a fountain of original and independent discovery." Samuelson added, "Had his earliest writings been in English, a generation of economic theory would have taken a different course."⁴

Samuelson put his finger on one important reason that Allais has not been better known or his work more widely read outside France. This "underuse" of his ideas is reflected in a relatively low rate of citations to his works, as compared with that of other Nobel Prize winners in economics who have been featured in these pages.⁵⁻¹¹ Simply put, not writing in English is an impediment to the widest circulation and hence a fuller appreciation of any scholar's work. That is not an expression of cultural imperialism; it is merely the way the world works at present. Over the years I have written repeatedly on this theme, most recently in *THE SCIENTIST*®.¹²

Besides being written in French—at least the early writings—his works are dense and

lengthy treatises. During the press conference in Stockholm announcing the award, Assar Lindbeck, who heads the Nobel committee for economics, told reporters that Allais has "been under consideration for a long time. It took a long time to investigate him because of the great volume and complexity of his works."¹³ Allais has published more than 1,000 articles (not all on economics) and some three dozen books.

Biographical Sketch

Maurice Allais was born in Paris in 1911, the son of a dairy-store proprietor. He graduated at the top of his class at the Polytechnic School, Palaiseau, France, in 1933, after which he studied at the National School of Mines, finishing his early studies in 1936. For the next few years, Allais held positions in France's state-directed mine administration. In 1944 he became a professor of economic analysis at his alma mater, the National School of Mines, from which he retired some 10 years ago. In 1954 he also became a director of research at the National Scientific Research Center (CNRS), Paris. CNRS honored Allais in 1976 with its Gold Medal. A year later he was made an officer of the Legion of Honor and in 1981 a commander of the National Order of Merit. Allais has received many other prizes and honorary degrees.

Although originally trained in mining and engineering (he earned a doctoral degree in engineering in 1949 from the University of Paris), in the 1930s Allais was already turning his attention toward economic studies. His interest in economics was ignited by a trip to the US, where he saw firsthand the devastation of the Great Depression. He saw what he later referred to as "a graveyard of factories" and recollected that "I needed to know why." He continued: "My motivation was an idea of being able to improve the conditions of life, to try to find a remedy to many of the problems facing the world.... That's what led me into economics. I saw it as a way of helping people."¹⁴ At the time of the award last October, he said that he knew his name had been considered in the past by the Nobel committee but that he had given up thinking he might actually win. He took special pleasure in using his new-

found prominence to rail against France's mandatory retirement age for university professors, remarking that "politicians think it's normal that they should not retire, while they think it's normal to push scholars into retirement."¹⁵

But there was never any chance that Allais's retirement would be an idle one. He is an energetic individual with many interests. He frequently writes commentaries for French newspapers and is an enthusiast for the physical sciences, especially the geosciences. For example, in the late 1950s, Allais published a series of articles on experiments he performed with a pendulum of his own construction, in which he demonstrated that earth's gravity force is neither constant nor regular in direction. The last of these papers appeared in 1959.¹⁶

He also enjoys physical activity, including skiing and swimming.

Major Contributions

"The foremost contribution of Maurice Allais was made in the 1940s, when he continued to develop Walras's and Pareto's work by providing increasingly rigorous mathematical formulations of market equilibrium and the efficiency properties of markets," reads the press release of the Nobel committee. "On the basis of mathematical models of households' and firms' planning and choice, he introduced a very general formulation of the conditions for market equilibrium."¹⁷ Allais focused on the notion that prices could be adjusted and resources allocated to create an economy that is balanced (with supply and demand in an equilibrium state) and socially efficient, meaning that no one can become better off without someone else becoming worse off. His conclusions were theoretical, but, as already mentioned, they had much practical import.

His first major book—a massive volume of 1,000 pages—was *A la Recherche d'une Discipline Économique (In Search of an Economic Discipline)*,¹⁷ published in 1943. A second edition was published in 1952 under the title *Traité d'Économie Pure (Treatise on Pure Economics)*.¹⁸ It was through this book that Allais's ideas about equilibrium pricing first became widely known and through which he greatly influ-

enced the course of economic decision making in France after World War II. According to data from ISI's *Science Citation Index*[®], 1945-1988, and the *Social Sciences Citation Index*[®], 1966-1988, this is Allais's fifth most-cited work (see Table 1).

His second landmark book of the 1940s was *Économie et Intérêt (Economics and Interest)*,¹⁹ published in 1947. This work has been cited the same number of times as the book just mentioned (see Table 1). In *Economics and Interest*, Allais showed that the optimum interest rate for a no-growth economy would be 0 percent. Real income is accumulated most efficiently when the interest rate is equal to the growth rate of the economy. His ideas on economic growth anticipated the work in the 1950s of other economists, such as Robert M. Solow, MIT, the 1987 Nobel recipient.

The Nobel committee pointed out that these two books parallel work in the English-speaking world by Samuelson (his *Foundations of Economic Analysis* of 1947²⁰) and by one of the 1972 Nobel laureates in economics, Sir John R. Hicks, All Souls College, Oxford, UK (his *Value and Capital* of 1939²¹). Allais was working independently, however, as he was largely self-taught in economics.

The most-cited work of Allais, with 137 citations, is a 1953 article that deals with how individuals evaluate risk and how, facing risks in real situations, they make economic decisions²² (see Table 1). Allais's views on this subject were contrary to the interpretation of US and UK economists, who believed that individuals will always seek to maximize their return on investment. But Allais proved that things were not so simple. Sometimes, for the sake of an assured return, an individual will accept a less-than-maximal return. More specifically, Allais showed "a preference for security in the neighbourhood of certainty when dealing with sums that are large in relation to the subject's capital."²³ This has come to be called the Allais Paradox. He introduced this then contrarian view at an international meeting of economists in Paris in 1952, where he had the conference participants answer a questionnaire. The survey revealed that the economists themselves, despite their stated beliefs, preferred certain

Table 1: Works by Maurice Allais cited 10 times or more in the *SCI*[®], 1945 to 1988, and in the *SSCI*[®], 1966-1988. The papers are arranged in ranked order according to total number of citations. A = total number of citations. B = bibliographic reference. *SCI/SSCI* research fronts to which the paper is core are listed in parentheses after the citation.

| A | B |
|-----|---|
| 137 | Allais M. Le comportement de l'homme rationnel devant le risque: critique des postulats et axiomes de l'École Américaine (Rational behavior in the face of risk: a critique of certain postulates and axioms of the American School). <i>Econometrica</i> 21:503-5, 1953. (87-0556, 86-0233, 85-0538) |
| 85 | Allais M & Hagen O, eds. <i>Expected utility hypotheses and the Allais Paradox: contemporary discussions of decisions under uncertainty with Allais' rejoinder</i> . Boston, MA: Reidel, 1979. 714 p. |
| 22 | Allais M. Method of appraising economic prospects of mining exploration over large territories. <i>Manage. Sci.</i> 3:285-347, 1957. |
| 21 | Allais M. A restatement of the quantity theory of money. <i>Amer. Econ. Rev.</i> 56:1123-55, 1966. |
| 14 | Allais M. <i>A la recherche d'une discipline économique (In search of an economic discipline)</i> . Paris, France: Imprimerie Nationale, 1943. 1,000 p. |
| 14 | Allais M. <i>Économie et intérêt (Economics and interest)</i> . Paris, France: Imprimerie Nationale, 1947. 800 p. |

short-term gains over the possibility of long-term windfalls when faced with a real situation. In the jargon of his fellow economists, Allais had overturned the theory of maximization of accepted utility, a theory held almost universally for over four decades. His 1953 article is a core document in ISI research fronts, or specialty areas, "Utility theory and assessment" (#85-0538), "Decision making under ambiguity" (#86-0233), and "Decision making under risk" (#87-0556) (see Figure 1).

Finally, Allais has written about the volume of money in an economy, both its determinants and its dynamic effects. He became interested in the mid-1950s in the psychological aspects of hyperinflation and of how psychological time was a more important guide to revealing how people responded to inflation than was chronological time. One of his 1966 papers on the volume of money is his fourth most-cited work (see Table 1).²⁴ As mentioned earlier, some of this work anticipated the views of the monetarist (or money-supply) school of modern economic thought.

In his Nobel lecture, Allais himself stated that his contributions to economics were, principally, in five areas: the theory of the equilibrium state in an economy and maximal efficiency, the theory of intertemporal processes maximizing capital, studies of choice in light of risk, the theory of money and credit in their dynamics aspects, and the analysis of economic time series and their external determinants.²⁵

Allais's award was the 20th Nobel Prize in economic sciences, which was established

in 1968 by the Bank of Sweden to mark its 300th anniversary. To date, 26 economists have received the honor (joint awards were given in 1969, 1972, 1974, 1975, 1977, and 1979). The US claims 15 laureates in economics; the UK, 5; Sweden, 2; and France, Norway, The Netherlands, and the USSR, 1 each. Among institutions represented by the 15 US economics prizewinners at the time they received the prize, MIT; Harvard University, Cambridge, Massachusetts; and the University of Chicago, Illinois, have had 3 laureates each. Yale University, New Haven, Connecticut, has had two laureates. Carnegie-Mellon University, Pittsburgh, Pennsylvania; the University of California, Berkeley; the University of Pennsylvania, Philadelphia; and George Mason University, Fairfax, Virginia, have each had one faculty member so honored.

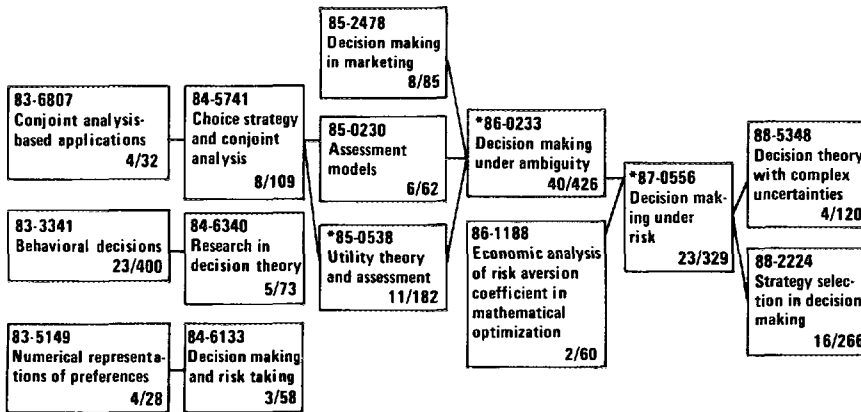
Literature

The 1988 Nobel Prize for literature was awarded last year to Egyptian novelist Naguib Mahfouz for "works rich in nuance—now clear-sightedly realistic, now evocatively ambiguous...an Arabian narrative art that applies to all mankind."²⁶

While continuing the recent trend of recognizing writers outside the mainstream of Western literature, this was the first time a representative of the Arab world won the Nobel Prize in literature.

Roger Allen, professor of Arabic literature, University of Pennsylvania, and a translator of a number of novels by Mahfouz, has observed that Mahfouz "pi-

Figure 1: Historiograph of research on risk theories. Numbers of core/citing papers are indicated at the bottom of each box. Asterisks (*) indicate research fronts in which Maurice Allais is a core author.



oneered the development of the modern Arabic novel and [became] its first genuine master."²⁷

Biographical Sketch

Born in Cairo, Egypt, in 1911, Mahfouz spent his working years as a cultural officer in the Egyptian civil service, from 1934 to his retirement in 1971. During these years and since, he has written nearly 40 novels, 12 books of short stories, more than 30 screenplays, and a weekly column, "Point of View," for the major Egyptian newspaper *Al-Ahram*. (See Table 2 for bibliographical information on some of Mahfouz's writings that have been translated into English.) He now lives with his wife, two daughters, and two dogs in an apartment in Cairo.

Mahfouz's first three novels (published between 1939 and 1944) were historical romances set in ancient Egypt.

In 1945 his novel writing entered a new phase, social realism, a style that he continued through eight books until 1960. *Zuqaq al-Midaqq (Midaqq Alley)* is one of the most famous novels of this period. It examined unrest in Egypt's urban society. With Mahfouz's *Al-Thulathiyya (The Cairo Trilogy)* of 1956-1957, the writer became famous among his countrymen. For *The Cairo Trilogy* Mahfouz was awarded in 1957 the State Prize for Literature.

The Cairo Trilogy also foreshadowed a new, more impressionistic style that utilized

much symbolism, absurdism, and a stream-of-consciousness narrative. It is the style that Mahfouz has employed throughout the entire third phase of his career. An example, also one of his most popular works, is *Awlad Haratina (Children of Gebelawi)*, which reflects the writer's deepening political disillusionment and growing concern with portraying the failure of Egyptian society to achieve the hopes of the 1952 revolution. *Children of Gebelawi* was held in contempt by religious leaders and branded as "defamatory to Islamic prophets."

Other controversial writings followed: *Miramar* (1967) attacked then President Gamal Abdel Nasser's revolution and *Al Karnak* (1974)²⁸ profiled the abusive cruel acts of the secret police against students in the 1960s. Moreover, owing to his support for Egyptian President Anwar Sadat's peace initiative and treaty with Israel in the late 1970s, Mahfouz's works were banned in many Arab countries.

Major Contributions

According to many scholars and critics, Mahfouz is today recognized as the chief exponent of the Arab novel. He has displayed in his writings an uncanny ability to convey nuances of the collective Egyptian psyche, with its shadings of paradox and irony. He describes himself as "...a child of two civilizations, which...entered into a harmonious marriage with each other. The first of these, 7,000 years old, is the civilization of ancient

Table 2: Selected works by Naguib Mahfouz translated into English.

- Autumn quail (Al-summan wa al-kharif)*. (Allen R, tr. and Rodenbeck J, ed.) Cairo, Egypt: American University in Cairo Press, 1985. 148 p.
- Children of Gebelawi (Awwad haratina)*. (Stewart P, tr.) London: Heinemann, 1981. 355 p.
- Fountain & tomb (Hakayat harema)*. (Kenneson J, Fatouh E & Sobhy S, trs.) Washington, DC: Three Continents Press, 1988. 110 p.
- God's world: an anthology of short stories*. (Abadir A & Allen R, trs.) Minneapolis, MN: Bibliotheca Islamica, 1973. 240 p.
- Midaq Alley (Zuqaq al-Midaqq)*. (Le Gassick T, tr.) Washington, DC: Three Continents Press, 1975. 246 p.
- Miramar*. (Mahmoud F M, tr. and el Kommos M & Rodenbeck J, eds.) London: Heinemann, 1978. 141 p.
- Mirrors (Al-maraya)*. (Allen R, tr.) Minneapolis, MN: Bibliotheca Islamica, 1977. 277 p.
- Respected sir (Hadrat al-muhtaram)*. (El-Enany R, tr.) Cairo, Egypt: American University in Cairo Press, 1987. 154 p.
- The beggar (Al-shahhadh)*. (Henry K W & al-Warraki N K N, trs.) Cairo, Egypt: American University in Cairo Press, 1986. 124 p.
- The beginning and the end (Bidaya wa nihaya)*. (Awad R H, tr. and Smith M R, ed.) Cairo, Egypt: American University in Cairo Press, 1985. 380 p.
- The search (Al-tariq)*. (Islam M, tr. and Wahba M, ed.) Cairo, Egypt: American University in Cairo Press, 1987. 128 p.
- The thief and the dogs (Al-liss wa al-kilab)*. (Le Gassick T & Badawi M M, trs. and Rodenbeck J, ed.) Cairo, Egypt: American University in Cairo Press, 1984. 110 p.
- Wedding song (Afrah al qubbah)*. (Kenny O E, tr. and El Din M S & Rodenbeck J, eds.) Cairo, Egypt: American University in Cairo Press, 1984. 100 p.

Egypt and the second, 1,400 years old, is that of Islam."²⁹ His works reflect the constant tension between the ancient coexisting with the modern in Egyptian everyday life. They chronicle lives of ordinary citizens and convey the feel of the streets and back alleys of Cairo.

Probably, however, Mahfouz's most important achievement is to have given the novel a place of its own, its own identity and character, in the Arab world. Summarizing this impact, Allen has written that Mahfouz

has contributed to modern Arabic fiction in a vast outpouring of writing unmatched by any other writer. Uniquely placed to seize the particular historical moment and to reflect the aspirations and concerns of newly emerging classes and societies as the Arab world began its postrevolutionary phase, he has been able to provide a succession of models in Arabic to place alongside the great traditions of the Western novel as both reflection and catalyst of change and as a mirror of mankind's highest hopes and bitterest moments of despair and alienation.³⁰

Mahfouz's work is still largely unknown in the US and Europe, although several novels have been translated into English (see Table 2), as well as Swedish, French, and German.

The citation record for Mahfouz's writings in ISI's *Arts & Humanities Citation Index*[™], 1976-1988, is rather modest. His most-cited work over this period and among the (mostly Western) journals indexed has been *Midaq Alley*, with 14 citations, and the second, *Children of Gebelawi*, which has been cited 12 times.

British writer John Fowles has referred to the "linguistic Iron Curtain" that keeps much of Arabic writing and culture from the West,³¹ and in fact Mahfouz credits a French translation of *The Cairo Trilogy* (1957) with bringing his work to the attention of the Nobel committee. This novel chronicles three generations of a Cairene family before, during, and after the military coup that overthrew King Farouk.

Three Continents Press, Washington, DC, specializes in publishing books of Third World writers, including some by Mahfouz. Within one day of the announcement of the literature prize, Three Continents and other of Mahfouz's US distributors had their inventories drastically depleted by the sudden demand for his writings.³² Doubleday has recently acquired US publishing rights to Mahfouz's works and plans to publish three of his novels this fall.³³ Worldwide rights are held by the American University in Cairo Press.

Of his prize, Mahfouz has predicted, "I believe that from now on the international

doors have opened and in the future literate people will look for Arab literature, and Arab literature deserves that recognition."³⁴ Mahfouz's books will now likely be cited more frequently, thanks to the attention they have received since last October. That is a pattern we have observed with regard to the work of other Nobel laureates in literature whose writings had been largely unknown in the West.

This is the fourth and final installment of a series of essays on the 1988 Nobel Prize

winners. The other three dealt with the prizes in chemistry,³⁵ physiology or medicine,³⁶ and physics.³⁷

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